

of having met with it north of the Cape Colony. This is the second example I have seen here during a residence of four years. The above-mentioned bird was in full and splendid dress.

On the 22nd of October my brother shot a female specimen of the Greenshank (*Totanus canescens*) still in winter plumage. They are scarce in these parts. The Bronze Cuckoo (*Chrysococcyx cupreus*) is common hereabouts (Pretoria district). On the 22nd October I shot a specimen in typical and glorious plumage. The bird was really gorgeous in its brilliant and fiery golden (and in some lights bronzy) green colour. Naked skin round eye light scarlet; irides light carmine; culmen and tip of lower mandible horn, remainder of lower mandible light bluish slate-colour; legs and toe-nails brownish black.

After rather a long absence the Hoopoes (*Upupa africana*) have once more made their appearance in our district, and in no small numbers. On October the 22nd I shot three specimens. On the 5th August, 1899, I obtained a specimen of the Bakkakiri Busk-Shrike (*Laniarius gutturalis*) in interesting plumage. The whole chin, throat, breast, and underparts were of a blackish-yellow colour, without the black and yellow markings on the three former regions. Iris yellowish brown; base of lower mandible light horn-colour, rest of bill black.

Modderfontein,
3rd April, 1900.

V.—Notes on the Nesting and other Habits of some South-African Birds. By R. H. IVY*.

1. LAMPROCOLIUS MELANOGASTER (Sw.); Sharpe, Cat. B. xiii. p. 182.

This bird is not common here, and though I have seen several clutches of eggs, I myself have only once found the

* [Mr. Ivy, a resident at Grahamstown, in the Eastern Province of Cape Colony, has sent me the following notes on the habits of some of

nest, which was placed in a hole in a tree situated in a deep kloof; the eggs, two in number, were of a light sky-blue, peculiarly roughened and quite unspotted.

2. *PETRONIA PETRONELLA* (Licht.); Sharpe, Cat. B. xii. p. 297.

I have found many nests of this species in the decayed centres of the branches of the euphorbia-trees. The bird makes a small opening in the bark, and on a deposit of a few feathers and down in the hollow of the branch lays from three to four dull brown unspotted eggs. It breeds in companies, and the eggs are difficult to obtain, as the branches of the euphorbias are high up above the ground, and though heavy are brittle and rotten, so that the only way of securing the eggs is to cut off the branch at the base. The eggs are very unlike those of the Common Sparrow (*Passer arcuatus*).

3. *EMBERIZA FLAVIVENTRIS* Bonn. et Vieill.; Sharpe, Cat. B. xii. p. 499.

I have never found the nest of this bird in a low bush or on the ground, though I have seen many hundreds of them. Those I have seen have usually been placed on the outer branches of an acacia-tree, from 6 to 10 feet above the ground. The nest is cup-shaped, about $2\frac{1}{4}$ inches across, and is composed of fine twigs and roots, and lined with finer material of the same description. The eggs, four or five in number, are never merely spotted, but are scrolled round the obtuse end with purplish brown on a white ground.

4. *CINNYRIS VERREAUXI* Smith; Gad. Cat. B. ix. p. 75.

This bird, like *C. chalybeus*, was very rare here until about the year 1895, when both became plentiful, and still remain so. In this district it always builds in a place such as no other Sun-bird would select, either in dense shade under

the birds observed by him in the neighbourhood of that town. His observations on the Cuckoos and Honey-guides seem to me particularly interesting, and to be well worth recording, as so little is known of these birds in South Africa.—W. L. SCLATER.]

heavy bush or sometimes on the side of a krantz or precipice, suspending the nest from a runner or creeper. The fabric is unmistakable at first sight, being more like that of a spider on a large scale than anything else. The inside and central portion, with the sheltering porch, are neat and compact, while it is lined with down-feathers and other fine materials; but around the whole, and often hanging down in a dangling manner for some inches below, is a loose mass of dead leaves and twigs, all interwoven with cobweb. In fact, though the nest be quite new, it often looks like some weather-worn cobweb-structure. The eggs are stated by Stark to be two in number, and mottled and spotted; but according to my experience they are from three to five in number, and of a rich coffee-brown, without markings of any sort. There must be an error somewhere.

5. *UPUPA AFRICANA* Bechst. ; Salv. Cat. B. xvi. p. 14.

This Hoopoe nests in hollow trees, also in ant-heaps. The eggs, four or five in number, are of a creamy fawn-colour. The nesting-season is from October to January.

6. *IRRISOR VIRIDIS* (Licht.) ; Salv. Cat. B. xvi. p. 17.

I have found this bird nesting in the deserted hole of a Woodpecker in a "yellow-wood" tree (*Podocarpus*), also in euphorbias, in November and December. The eggs are three in number and blue in colour. The bill of the young is much shorter than that of the adult.

On another occasion, at Fish-River Randt, in December 1894, I found this bird making use of a deserted nest of *Parus afer* in a hole in the trunk of a sanga (*Cusconia*). On felling the tree we found three eggs, but only one not broken.

7. *INDICATOR SPARRMANNI* Steph.

Indicator indicator Shelley, Cat. B. xix. p. 5.

On the 4th of November, 1894, I saw one of these birds leave a nest of *Hirundo albigularis*. An examination showed that the nest contained two small white eggs of the Swallow and one large oval egg of the Honey-guide.

8. INDICATOR MAJOR Steph. ; Shelley, Cat. B. xix. p. 6.

In November 1894, at Blue Krantz, in the Uitenhage division, I noticed one of these Honey-guides being chased by two Drongos, the nest of which we saw on the top of a high euphorbia. We could distinctly make out the transparent egg of the Honey-guide along with the more opaque-white eggs of the Drongo, of which there were three.

9. INDICATOR VARIEGATUS Less. ; Shelley, Cat. B. xix. p. 7.

In February 1895 I was encamped on the Zwart-kop river, near Springfield, in the Uitenhage district. Here every day one of these birds came up close to our camp, and on six occasions led us to the nests of wild bees among the trees and neighbouring rocks. The Honey-guide would perch on some tree and commence calling "cha-cha-cha," to attract our attention. We followed its lead, talking to the bird all the while, as I was assured by my companions that unless we "kept up the conversation" the bird would leave us: so we answered in such terms as "Pretty Jennie," "Good bird," or "Here we are." When we got to the vicinity of the nest, the bird would not go close, but kept a little distance off, leaving us to search for the exact spot, which was easily found by watching the passing bees*.

10. INDICATOR MINOR Steph. ; Shelley, Cat. B. xix. p. 9.

I have often watched this bird killing bees at a hive, but have never known it lead any one to a nest of wild bees. At Blue Krantz, in October 1898, I was nesting up a gorge, and heard some strange noises in the dense bush overhead. I therefore lay in the shade to watch, thinking it was some small mammal fighting. After some time I saw a Honey-guide fly to a hole in the trunk of a tree and endeavour to enter. It was, however, opposed by a male Barbet (*Melanobucco torquatus*), which was shortly afterwards joined by the female, and the Honey-guide was very soon hustled out, and flew off across the gully, closely followed by the female Barbet, chattering and fighting all the while.

In about five minutes the Honey-guide reappeared, and

* [On this subject see the letter in 'The Ibis,' 1900, p. 691.—EDD.]

the same scene took place, and this continued for about an hour. We then shot all three birds with one charge. The Honey-guide fell at our feet, and had an egg protruding from the vent, being covered with skin, probably an evaginated portion of the lower part of the oviduct. Fortunately the egg was unbroken; it was very transparent and the yolk showed through. In the nest itself were two of the usual white eggs of the Barbet, quite fresh.

11. MELANOBUCCO TORQUATUS (Dumont); Shelley, Cat. B. xix. p. 24.

In November 1893 I saw a pair of these birds boring away at a decayed willow-tree overhanging a stream. Beneath the tree, lying on some damp sand, were four eggs of the same bird, quite fresh and obviously just deposited.

12. TRICHOLEMA LEUCOMELAS (Bodd.); Shelley, Cat. B. xix. p. 31.

I found a breeding-place of this bird at Walmer, near Port Elizabeth, in November 1892. It was in an old tree-trunk, and was somewhat like that of *Melanobucco torquatus*, being merely a hole about $1\frac{1}{2}$ inch in diameter, running about 2 inches inwards, and then downwards about 6 inches. At the bottom were four white eggs, resting merely on some fragments of rotten wood.

13. COCCYSTES GLANDARIUS (Linn.); Shelley, Cat. B. xix. p. 212*.

Mr. B. Campbell, of Rocklands, Fish River, brought me, in December 1892, two eggs of this bird. They were of a pale dull blue, with small blackish spots; they had been found in a nest of the Black Crow (*Corvus capensis*), along

* [This Cuckoo breeds also in Southern Spain and Northern and North-eastern Africa, where it usually selects a Magpie or Crow's nest to deposit its eggs. The breeding-season in this case is in April or May. It is very remarkable, therefore, to find the same bird in South Africa breeding in December. Do our southern birds migrate as far as the northern breeding-area, and again lay eggs in the spring of the northern hemisphere? or do they only go as far as Central Africa in April, spending our winter-season there and returning south to breed in our southern spring?—W. L. S.]

with three of the typical pink-cream speckled eggs of that bird.

In the same month of the same year I found a nest of the Red-winged Starling (*Amydrus morio*) placed on a ledge on the face of a krandah, 12 feet from the ground. The nest, which was cup-shaped, and made of fibres and roots, supported on a mud base, contained a young Great Spotted Cuckoo. I kept this bird in a large well-lighted room, feeding it on larvæ and chopped meat. It developed its feathers and began to fly about two weeks after I found it. It resembled the adult bird, except that the grey of the back was much darker and the buff of the chest more intense. The bird became very tame, flying to my shoulder on my calling to it, and often taking journeys outside my room. In April it became very restless, dashing against the walls and windows, and finally died about the middle of the month.

I have seen a pair of old birds of this species with five young all flying together late in February. I believe that the old birds collect their broods previously to migrating.

14. COCCYSTES JACOBINUS (Bodd.); Shelley, Cat. B. xix. p. 217.

This bird was seen by Mr. F. Pym to leave the nest of a Bulbul (*Pycnonotus tricolor*) in the Belmont valley, near Grahamstown. On examination the nest was found to contain one Cuckoo's egg (white) and two of the Bulbul's (spotted with pinky red). In November 1894 I found a nest of *Andropadus importunus*, containing two of the usual eggs (white with brown and purple marbling) in addition to five large Cuckoo's eggs. These all together more than filled the small cup-shaped nest, the rightful occupants of which were flitting about in an excited state. Close by three Cuckoos (*Coccytes jacobinus*, *Coccytes serratus*, and *Cuculus clamosus*) were observed, and from the different sizes and shapes of the eggs I believe that all these three Cuckoos had utilized the one tiny nest.

On another occasion I found an egg of this bird in the

nest of *Campophaga hartlaubi*, together with a young bird belonging to the host. The egg turned out to be addled; but that it did belong to this Cuckoo was evidenced by the fact that a *Coccytes jacobinus* had been seen to visit the nest.

15. *COCCYTES SERRATUS* (Sparrm.); Shelley, Cat. B. xix. p. 223.

In December 1897 I saw one of these birds leave the nest of a Coly (*Colius erythromelon*). The nest contained three eggs of the host (white with a few pinky scratches), together with one egg of the Cuckoo (pure white).

16. *CUCULUS SOLITARIUS* Steph.; Shelley, Cat. B. xix. p. 258.

In November 1896 I found an egg of this Cuckoo in the nest of a "Cape Robin" (*Cossypha caffra*), together with two eggs of the latter bird.

In the same month I found a young Cuckoo of this species in the nest of a Rock-Thrush (*Monticola rupestris*) (see fig. 2, p. 25). The nest, which was placed on a ledge of a krantz or cliff, had been extended on either side with a packing of loose moss, so as to prevent the young Cuckoo from upsetting it. One broken egg of the Rock-Thrush lay on the ground below the nest. We waited an hour for the foster-parents, who had flown off on our first approach, to return, but they did not do so, although an adult Cuckoo (*C. solitarius*) flew past.

In December 1897 I saw a pair of Cape Robins (*Cossypha caffra*) flying in attendance on a young *Cuculus solitarius*; they were much more demonstrative than is their usual habit with their own young. The two flew before us for over a mile along a water-cut, while the old Cuckoo kept calling out.

On November the 9th, 1897, I found a nest of *Cossypha caffra* in a neighbouring garden, containing two of the usual pinky-cream eggs, one of which had been deposited only that morning. This nest was only about six inches distant from another, where presumably the same parents had hatched a brood in September. On revisiting the nest next day I



Fig. 2.

Young Cuckoo (*Cuculus solitarius*) in a Rock-Thrush's nest.
(From a photograph.)

found, in addition to the Robin's eggs, which were quite fresh, an egg of *Cuculus solitarius*, partly incubated.

In December 1898 I found another nest of *Monticola rupestris* containing two eggs of the Rock-Thrush and one of *Cuculus solitarius*.

In November 1899 I found a single egg of *Cuculus solitarius* in a nest of the South-African Stone-Chat (*Pratincola torquata*), situated in the wall of an old kraal close to Grahamstown; there were three eggs of the Stone-Chat in the nest.

17. *CUCULUS CLAMOSUS* Lath.; Shelley, Cat. B. xix. p. 260.

In December 1891 I watched one of these birds for several hours, and finally saw her fly into a thorn-bush close to a picnic party. On going to the bush I found a nest of *Dendropadus importunus* containing two eggs with the usual markings of grey and brown, together with a single large white Cuckoo's egg, slightly incubated, while the others were fresh. I have noticed that both this and the former species (*Cuculus solitarius*) seem to return to the same neighbourhood every year.

18. *CHRYSOCOCCYX SMARAGDINEUS* (Sw.); Shelley, Cat. B. xix. p. 280.

This bird is not common in the eastern portion of the Cape Colony; during twenty years' observation I have only seen two, a male near Grahamstown and a female in the Uitenhage division.

19. *CHRYSOCOCCYX CUPREUS* (Bodd.); Shelley, Cat. B. xix. p. 285.

The Didric Cuckoo is plentiful in the Fish-River district to the north of Grahamstown, and I have obtained specimens there all through the winter. In December 1890 also, while encamped on the Modder River near Bloemfontein, I found this bird very plentiful and easily to be recognized by its plaintive cry. After a long search I observed that one Cuckoo frequented a small acacia-bush, from which it repeatedly called "di-di-dideric," and on passing the bush just before leaving the district I noticed a Red-vented Fly-

Fig. 3.



Nest and eggs of *Centropus natalensis*.
(From a photograph.)

catcher (*Parisoma subcæruleum*) chattering in an excited state, which suggested that an Owl or a snake was close by. An examination at once revealed the presence not only of a puff-adder (which was quickly dispatched), but also of a nest, about 3 feet from the ground, containing three eggs—two white, with faint grey blotches, of the usual type of *Parisoma*; the third larger and white, and showing the yolk through the transparent shell. This, I have little doubt, is the egg of the Didric Cuckoo, and although the identification is not absolute, it is nearly as good as one can expect for a Cuckoo's egg.

20. *CHRYSOCCYX KLAASI* (Steph.); Shelley, Cat. B. xix. p. 283.

This is one of the commonest Cuckoos in the Albany division. On November the 9th, 1892, I noticed one of these birds flitting about some low bush in the Belmont valley near Grahamstown, and, contrary to its usually shy nature, perching within a few feet of our heads. We searched the vicinity thoroughly, and found several nests, but could not discover the egg of the Cuckoo, although we were certain it was close by. Later in the evening Mr. Pym, my companion, found a nest of the Malachite Kingfisher (*Corythornis cyano-stigma*) in the bank of a stream, just below where the Cuckoo was calling; it contained six small round eggs of the usual Kingfisher-type, and one longer egg, beautifully transparent, showing the yolk through the shell. On blowing this egg we found that the yolk was of a much deeper shade of orange than that of the Kingfisher.

21. *CENTROPUS NATALENSIS* Shelley; Shelley, Cat. B. xix. p. 362.

This bird is not parasitic, but builds a nest in a thick bush. One I found near Belmont, in November 1894, was placed on a platform of dried stems of weeds and overshadowed by a wild vine; it contained five white eggs (see fig. 3, p. 27).